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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/784,238

02/24/2004

Jean-Pierre Bonicel

Q79969

1583

7590

01/21/2005

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EXAMINER

HYEON, HAE M

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,238

Applicant(s)

BONICEL ET AL.

Examiner

Hae M Hyeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/24/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 is not reciting any thing new. It is only reciting the electrically insulating transition, which is already recited in claim 13.

4. Claims 2-12, 14 and 16 are objected to because of the following informalities:

- Claims 2-12, line 1 "An electrical insulator" should be -- The electrical insulator --.
- Claims 14 and 16, line 1, "An electrically insulating transition" should be -- The electrically insulating transition --.
- Claim 12 recites the limitation "said optical fibers" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Goch (5,637,827).

Goch discloses an electrical insulator comprising a fiberglass rod 120 having a slot 122, an optical fiber cable 170 disposed in the slot 122, a dielectric covering 164 surrounding the rod

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120 and presenting outwardly-directed projections in the form of skirts, and a dielectric silicone material filling all the space in the slot 122 between the rod 120 and the cable 170. Figure 5 shows the rod 102 having two slots 104 and 106. Although, Goch does not state the function of the optical fiber cable to be a telecommunications cable, it is common knowledge that the optical fiber cable is commonly used in a telecommunication.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goch in view of Bottoms, Jr. et al (5,240,926).

Claim 2 recites that the slot is deeper than it is wide. However, the slot of Goch has the same dimension between the width and depth of the slot.

Bottoms, Jr. disclose an optical fiber cable comprising a rod 20 having a plurality of slots 21 with a deeper depth than a length of the width and an optical fiber cable 22 disposed within the slots 21. The cable 22 is placed on the bottom of the slots and a dielectric filling material 24 placed in all the space in the slot 21 between the rod 20 and the cable 22 in order to hold the cable 22 in the slots and to protect the cable from the harmful effects of the environment.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the slots of the rod taught by Goch such that it would have a

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length of the depth of the slot being greater than a length of the width of the slot as taught by Bottoms, Jr. to securely hold the optical fiber cable and to protect the cable from the harmful effects of the environment.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goch in view of Perry et al (3,485,940).

While claim 4 recites that the covering comprising a plurality of skirts stacked one on another, Goch discloses integrally made covering 164. However, Perry discloses an electrical insulator having a covering comprising a plurality of skirts 12, 14, and 16 stacked one on another.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the covering taught by Goch such that it would be made of a plurality of skirts as taught by Perry because it only deals with making a single covering into a plurality of parts. It has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

10. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goch in view of Hoefner et al (6,507,692 B1).

Claims 5 and 6 recite that the insulator includes an intermediate tube made of the same material as the covering situated between the rod and the covering.

Although, Goch discloses an intermediate tube 168, it is not situated in between the rod 120 and the covering 164. Instead, the intermediate tube 168 is situated between the slot 122 and the cable 170. However, it only deals with rearrangement of part to place the intermediate tube 168 in between the covering 164 and the rod 120 since the instant invention does not provide any

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reason or a specific problem to be solved by having the intermediate tube in between the covering and the rod. Therefore, it is an obvious design alternative.

In addition, Hoefner discloses an electrical insulator comprising a covering 4, 22; an intermediate tube 2, 20 situated in between the covering 4, 22 and a rod formed by filling compound filled within the intermediate tube 2, 20. The intermediate tube 2, 20 provides protection of a cable 16 placed within the intermediate tube 2, 20.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the electrical insulator taught by Goch such that it would have an intermediate tube in between a covering and a rod as taught by Hoefner because the intermediate tube would provide an additional protection of the rod and a cable placed within the intermediate tube.

11. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goch in view of Bonicel et al (6,035,087).

While Goch discloses the electrical insulator having an optical fiber cable 170, Goch does not describe the specific structure of the optical fiber cable 170.

Bonicel discloses an optical fiber cable 20 comprising a central reinforcing member 1, a plurality of tubes 3 containing optical fibers 2 disposed around the central reinforcing member 1, and an outer sheath 7 containing the central reinforcing member 1 and the tubes 3. Furthermore, Bonicel discloses that the diameter of each tube is 1.2 mm or 2.00 mm. Thus, it is clear from Figure 2 that the cable 20 has the diameter greater than 5 mm. Lastly, Bonicel teaches that the cable 20 is a telecommunication cable.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to replace the optical fiber cable taught by Goch with the optical fiber as

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taught by Bonicel because it only deals with using one type of an optical fiber cable over another type of optical fiber cables, which does not affect or change the function of the electrical insulator. Furthermore, an optical fiber cable comprising a central reinforcing member, a plurality of tubes with optical fibers and an outer sheath is commonly know structure of an optical fiber cable.

12. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goch in view of Fox, Jr. (4,610,033).

Claims 13-16 recite a box containing a cassette for storing optical fiber splices situated at one end of the electrical insulator of claim 1.

While Goch does not disclose a box, Fox, Jr. discloses one end of an electrical insulator 50 situated near a junction box 65 for joining optical fibers. Although, Fox, Jr. does not state that the junction box 65 contains a cassette, it is common knowledge in the art of an optical fiber that a cassette is used for storing optical fibers and to join a plurality of optical fibers.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the electrical insulator taught by Goch such that it would have a box with a cassette as taught by Fox, Jr. because it only deals with using the electrical insulator in different environment with different device, but the function of the insulator is not affected or changed.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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US Patent No. 4,212,696 by Lusk et al discloses a covering of an electrical insulator made of a plurality of parts.

US Patent No. 5,224,190 by Chu et al., US Patent No. 5,761,361 by Pfandl et al. and US Patent No. 6,654,525 B2 by Nechitailo et al. disclose an optical fiber comprising a central reinforcing member, a plurality of tubes with optical fibers and an outer sheath. Chu and Pfandl also disclose a rod having a plurality of slots having depth greater than its width.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon
Primary Examiner
Art Unit 2839

hnh

hnh

Hae Moon Hyeon